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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/536,101
Filing Date: March 24, 2000
Appellant(s): FINSETH ET AL.

Georgann S. Grunebach
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 1/31/06 appealing from the Office action mailed 5/5/05.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

This appeal involves claims 1-6, 8-14, 16-24, 26-34, 36-62.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

U.S. Patent Application Publication 2001/0013097 to Ito.

U.S. Patent 6,674,858 to Kimura.

U.S. Patent Application Publication 2003/0011684 to Narayanaswami.

U.S. Patent 6,615,408 to Kaiser.

U.S. Patent 6,137,952 to Hogan.

U.S. Patent Application Publication 2001/0013124 to Klosterman.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 19, 20, and 57-59 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Ito et al.

Regarding Claim 19, Ito shows a receiver for receiving content (page 1 section 0010, page 2 sections 0031-0033) comprising multiple frames (page 3 section 0047, motion images, different image frames), means for inserting receiver identification data into data representing the content (page 2 sections 0035-0039), and means for generating a display of images based upon the data representing the content and the receiver identification data (page 2 sections 0038-0039). Ito shows a number of ways of inserting ID data into a frame, including inserting the ID data into the luminance value of each pixel (page 3 sections 0044) and inserting the ID data into groups of pixels (i.e. 3x3 group of pixels) (page 3 sections 0049-0050, page 4 section 0055). Since the ID

information can be attached to numerous pixels and groups of pixels, multiple

copies of the ID are therefore inserted into one frame of programming data.

.   Regarding Claim 20, Ito shows that the receiver identification data is the

receiver ID number (page 1 section 0013).

Regarding Claim 57, Ito shows a number of ways of inserting ID data into

a frame, including inserting the ID data into groups of pixels (i.e. 3x3 group of

pixels) (page 3 sections 0049-0050, page 4 section 0055). Since the ID

information can be attached to a groups of pixels, multiple copies of the ID are

therefore inserted into one frame of programming data.

Regarding Claim 58, Ito shows that the group consists of a 3x3 block of

pixels, which is a block of 3 pixels for 3 lines (page 3 sections 0049-0050, page 4

section 0055).

Regarding Claim 59, Ito shows that a line comprises a plurality of pixels

(3x3 block, at least) (page 3 sections 0049-0050, page 4 section 0055). Ito

further shows that a bit of the line data is substituted with a bit of the ID data

(page 3 sections 0044, fig. 8). Ito also shows that not all of the pixel data needs

to be changed in order to insert the ID data (fig. 13-16, page 3 section 0050,

showing the use of a "modulo 3 arithmetic" that can add 0 to the pixel value,

which does not change the value and substantially skips a pixel).

Claims 1, 2, 9-10, 17-18, 27-30, 37-40, 44-56, and 60-62 are rejected under 35

U.S.C. 103(a) as being unpatentable over Ito et al in further view of Kimura et al.

Regarding Claim 1, Ito shows a receiver for receiving content (page 1

section 0010, page 2 sections 0031-0033) comprising multiple frames (page 3

section 0047, motion images, different image frames), means for inserting

receiver identification data into data representing the content (page 2 sections

0035-0039), and means for generating a display of images based upon the data

representing the content and the receiver identification data (page 2 sections

0038-0039). Ito shows a number of ways of inserting ID data into a frame,

including inserting the ID data into the luminance value of each pixel (page 3

sections 0044) and inserting the ID data into groups of pixels (i.e. 3x3 group of

pixels) (page 3 sections 0049-0050, page 4 section 0055). Since the ID

information can be attached to numerous pixels and groups of pixels, multiple

copies of the ID are therefore inserted into one frame of programming data.

Although Ito shows using this system for video, Ito fails to specifically state that

the system is used in the broadcast television environment. Kimura shows a

very similar ID inserting system that is used in the broadcast television

environment (col. 2 lines 5-45, col. 5 lines 20-67). Therefore, it would have been

obvious to one of ordinary skill in the art to modify the system of Ito for television

content so that the system of inserting receiver data could be used to catch

copyright violators in the TV environment.

Regarding Claim 2, Ito shows that the receiver identification data is the

receiver ID number (page 1 section 0013).

Regarding Claim 9, the limitations of the method claim have been

discussed with regards to the system claim of Claim 1.

Regarding Claim 10, all of the limitations of the claim have been discussed

with regards to Claim 2.

Regarding Claim 17, Ito shows a receiver for receiving video content

comprising multiple frames (page 3 section 0047, motion images, different image

frames) and inserting receiver identification data into generated images in a

manner that is undetectable to the casual observer (page 2 sections 0034-0035).

Ito further shows a controller, or ID imprinter, for retrieving identification data and

changing values of the pixel data to values of the identification data, the

controller thereby embedding the id data into the frame (page 2 sections 0038-

0039) and a display generator for generating a display of the first image (page 2

section 0037, see fig. 3). Also, Ito shows an image decoder, which acts as a

storage, or buffer, prior to imprinting the first image with id data (see fig. 3, page

2 section 0039). Finally, Ito shows an "ID Holder," which acts as memory, or

storage, for the receiver's unique ID (see fig. 3). Ito shows a number of ways of

inserting ID data into a frame, including inserting the ID data into the luminance

value of each pixel (page 3 sections 0044) and inserting the ID data into groups

of pixels (i.e. 3x3 group of pixels) (page 3 sections 0049-0050, page 4 section

0055). Since the ID information can be attached to numerous pixels and groups

of pixels, multiple copies of the ID are therefore inserted into one frame of

programming data. Ito fails to show a tuner or that television content is received.

Kimura shows that television content is received and the use of television tuning

circuitry (col. 5 lines 25-67, col. 6 lines 1-44, figs. 3 and 5). Therefore, it would

have been obvious to one of ordinary skill in the art to modify the system of Ito for

television content so that the system of inserting receiver data could be used to

catch copyright violators in the TV environment.

Regarding Claim 18, the limitations of the method claim have been

discussed with regards to the system claim of Claim 17.

Regarding Claim 27, the limitations of the claim have been discussed with

regards to Claim 1.

Regarding Claim 28, Ito shows substituting receiver identification data for

a subset of the data representing the content (page 2 sections 0038-0039).

Regarding Claim 29, Ito shows presenting the modified content to the user

on a presentation device (page 2 sections 0038-0039).

Regarding Claim 30, Ito shows that the receiver identification data is the

receiver ID number (page 1 section 0013).

Regarding Claim 37, Ito shows a receiver for receiving video content

comprising multiple frames (page 3 section 0047, motion images, different image

frames). Ito further shows a controller, or ID imprinter, for modifying at least a

portion of the data representing program content according to receiver

identification data (page 2 sections 0038-0039). Also, Ito shows an image

decoder, which acts as a storage, or memory, prior to imprinting the first image

with id data (see fig. 3, page 2 section 0039). Ito shows a number of ways of

inserting ID data into a frame, including inserting the ID data into the luminance

value of each pixel (page 3 sections 0044) and inserting the ID data into groups

of pixels (i.e. 3x3 group of pixels) (page 3 sections 0049-0050, page 4 section

0055). Since the ID information can be attached to numerous pixels and groups

of pixels, multiple copies of the ID are therefore inserted into one frame of

programming data. Ito fails to show a tuner or that television content is received.

Kimura shows that television content is received and the use of television tuning

circuitry (col. 5 lines 25-67, col. 6 lines 1-44, figs. 3 and 5). Therefore, it would

have been obvious to one of ordinary skill in the art to modify the system of Ito for

television content so that the system of inserting receiver data could be used to

catch copyright violators in the TV environment.

Regarding Claim 38, Ito shows that the controller modifies at least a

portion of the pixel data according to the receiver identification data (page 2

section 0038-0039, page 3 sections 0043-0044, 0047-0050).

Regarding Claim 39, Ito shows an "ID Holder," which acts as memory, or

storage, for the receiver's unique ID (see fig. 3).

Regarding Claim 40, Ito shows that the receiver identification data is the

receiver ID number (page 1 section 0013).

Regarding Claim 44, Ito shows logic for computing a plurality of order-

based analysis functions for records stored in a computer system comprising

receiving video data (page 1 section 0010, page 2 sections 0031-0033)

comprising multiple frames (page 3 section 0047, motion images, different image

frames), modifying the data to include receiver ID data (page 2 sections 0035-

0039), and providing the data to a presentation device (page 2 sections 0038-

0039). Ito shows a number of ways of inserting ID data into a frame, including

inserting the ID data into the luminance value of each pixel (page 3 sections

0044) and inserting the ID data into groups of pixels (i.e. 3x3 group of pixels)

(page 3 sections 0049-0050, page 4 section 0055). Since the ID information can

be attached to numerous pixels and groups of pixels, multiple copies of the ID

are therefore inserted into one frame of programming data. Although Ito shows

using this system for video, Ito fails to specifically state that the system is used in

the broadcast television environment. Kimura shows a very similar ID inserting

system that is used in the broadcast television environment for program data

(col. 2 lines 5-45, col. 5 lines 20-67). Therefore, it would have been obvious to

one of ordinary skill in the art to modify the system of Ito for television content

and program data so that the system of inserting receiver data could be used to

catch copyright violators in the TV environment.

Regarding Claim 45, Ito shows a number of ways of inserting ID data into

a frame, including inserting the ID data into groups of pixels (i.e. 3x3 group of

pixels) (page 3 sections 0049-0050, page 4 section 0055). Since the ID

information can be attached to a groups of pixels, multiple copies of the ID are

therefore inserted into one frame of programming data.

Regarding Claim 46, Ito shows that the group consists of a 3x3 block of pixels, which is a block of 3 pixels for 3 lines (page 3 sections 0049-0050, page 4 section 0055).

Regarding Claim 47, Ito shows that a line comprises a plurality of pixels (3x3 block, at least) (page 3 sections 0049-0050, page 4 section 0055). Ito further shows that a bit of the line data is substituted with a bit of the ID data (page 3 sections 0044, fig. 8). Ito also shows that not all of the pixel data needs to be changed in order to insert the ID data (fig. 13-16, page 3 section 0050, showing the use of a "modulo 3 arithmetic" that can add 0 to the pixel value, which does not change the value and substantially skips a pixel).

Regarding Claims 48-50, the limitations of the Claims have been discussed with regards to Claims 45-47.

Regarding Claims 51-53, the limitations of the Claims have been discussed with regards to Claims 45-47.

Regarding Claims 54-56, the limitations of the Claims have been discussed with regards to Claims 45-47.

Regarding Claims 60-62, the limitations of the Claims have been discussed with regards to Claims 45-47.

Claims 3-4, 11-12, 31-32, and 41-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al in further view of Kimura et al and Narayanaswami et al.

Regarding Claim 3, Ito and Kimura fail to show embedding date information in the receiver identification data. Narayanaswami shows embedding date information in a digital watermark of an image (page 1 sections 0004-0005). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Ito and Kimura with the ability to insert date data so that one could identify when an image was displayed.

Regarding Claim 4, Ito and Kimura fail to show embedding time information in the receiver identification data. Narayanaswami shows embedding time information in a digital watermark of an image (page 1 sections 0004-0005). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Ito and Kimura with the ability to insert date data so that one could identify when an image was displayed.

Regarding Claim 11, all of the limitations of the claim have been discussed with regards to Claim 3.

Regarding Claim 12, all of the limitations of the claim have been discussed with regards to Claim 4.

Regarding Claim 31, all of the limitations of the claim have been discussed with regards to Claim 3.

Regarding Claim 32, all of the limitations of the claim have been discussed with regards to Claim 4.

Regarding Claim 41, all of the limitations of the claim have been discussed with regards to Claim 3.

Regarding Claim 42, all of the limitations of the claim have been discussed with regards to Claim 4.

Claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al in further view of Narayanaswami et al

Regarding Claim 21, Ito fails to show embedding date information in the receiver identification data. Narayanaswami shows embedding date information in a digital watermark of an image (page 1 sections 0004-0005). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Ito with the ability to insert date data so that one could identify when an image was displayed.

Regarding Claim 22, Ito fails to show embedding time information in the receiver identification data. Narayanaswami shows embedding time information in a digital watermark of an image (page 1 sections 0004-0005). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Ito with the ability to insert date data so that one could identify when an image was displayed.

Claims 5, 13, 33, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al in further view of Kimura et al, Narayanaswami et al, and Kaiser et al (6,615,408).

Regarding Claim 5, Ito and Kimura fail to show using a removable access card for generating ID data. Narayanaswami shows using a removable access card for generating ID data (page 3 section 0036). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Ito and Kimura with the ability to use a removable access card so that users could easily be changed by swiping their individual cards and imprint individual information.

Ito, Kimura, and Narayanaswami fail to show using billing information from an access card. Kaiser shows using a removable ID card that can store financial and billing information (col. 7 lines 55-67, financial information cards). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Ito, Kimura, and Narayanaswami with the ability to use billing information on a card, as shown in Kaiser, so that the system would be able to embed a variety of receiver data into the watermark and determine appropriate billing for the functions.

Regarding Claim 13, all of the limitations of the claim have been discussed with regards to Claim 5.

Regarding Claim 33, all of the limitations of the claim have been discussed with regards to Claim 5.

Regarding Claim 43, all of the limitations of the claim have been discussed with regards to Claim 5.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al

in further view of Narayanaswami et al and Kaiser et al (6,615,408).

Regarding Claim 23, Ito fails to show using a removable access card for

generating ID data. Narayanaswami shows using a removable access card for

generating ID data (page 3 section 0036). It would have been obvious to one of

ordinary skill in the art at the time the invention was made to modify the system

of Ito with the ability to use a removable access card so that users could easily

be changed by swiping their individual cards and imprint individual ID

information.

Ito and Narayanaswami fail to show using billing information from an

access card. Kaiser shows using a removable ID card that can store financial

and billing information (col. 7 lines 55-67, financial information cards). Therefore,

it would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify the system of Ito, Kimura, and Narayanaswami

with the ability to use billing information on a card, as shown in Kaiser, so that the

system would be able to embed a variety of receiver data into the watermark and

determine appropriate billing for the functions.

Claim 6, 14, 24, and 34, are rejected under 35 U.S.C. 103(a) as being

unpatentable over Ito et al in further view of Kimura et al and Hogan (6,137,952).

Regarding Claim 6, Ito and Kimura fail to show using the saturation data to

include a digital watermark. Hogan shows manipulating the saturation data to

include a digital watermark (col. 4 lines 25-60, col. 7 lines 8-15, changing the

saturation value to imprint the video signal with a watermark). It would have

been obvious to one of ordinary skill in the art at the time the invention was made

to modify Ito and Kimura with the ability to use the saturation data to include a

watermark, as shown in Hogan, so that the system would have a wide variety of

data to manipulate to include the watermark and prevent unauthorized copying.

Regarding Claims 14, 24, and 34, all of the limitations of the claim have

been discussed with regards to Claim 6.

Claims 8, 16, 26, and 36 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Ito et al in further view of Kimura et al and Klosterman et al

(2001/0013124).

Regarding Claims 8, 16, 26, and 36, Ito shows that receiver ID information

is inserted in all images before they are displayed. Furthermore, Kimura shows

inserting ID information into television programming content. Ito and Kimura fail

to show displaying program guide data. Klosterman shows displaying program

guide images (fig. 10). Klosterman further shows that advertisements sent to

users that are viewed in the EPG can have a digital "watermark" (page 6 sections

0071-0072, embed customized information in to the advertisement stream of the

EPG, watermarking). Therefore, it would have been obvious to one of ordinary

skill in the art at the time the invention was made to modify the system of Ito and

Kimura with the ability to show EPG data with an embedded watermark, as

shown in Klosterman, so that the viewer could interactively view upcoming

programs and shows while still providing the system with the capability of

determining unauthorized viewing.

(10) Response to Argument

Arguments with respect to claims 19-20.

Appellant argues that Ito's teachings of inserting ID data into groups of pixels is

not the same as modifying a frame of data representing program content to include

multiple copies of receiver data. Additionally Ito's ID may be imprinted across the entire

image but does not teach imprinting multiple copies of the ID in a frame and in fact

plainly teaches away from it. (Page 13 paragraphs 2-5).

Regarding Appellant's argument, the Examiner disagrees. As admitted by

Appellant, Ito clearly inserts ID data into the pixels, which make up a frame of video

data (paragraphs 43-44).). Examiner asserts that Ito clearly shows imprinting multiple

copies of the ID on the image. Ito shows imprinting the ID in the LSB of the luminance

value of *each* pixel (page 3 section 0044, imprinting ID on the luminance value of

multiple pixels). Since multiple pixels will be imprinted with the ID, multiple copies are

used. Furthermore, Ito shows that the ID is imprinted over the entire image (page 3

section 0044). This is to protect against partial cut-off of the content (page 3 section

0044). This clearly indicates that multiple copies are used in multiple pixels in the case

that some of the pixels that have the data are not received properly. The system can chooses from several pixels to choose the ID so that it will always have a source of the ID. If only one single ID data was spread out over the entire image, this would then preclude the system from retrieving the correct ID if an error occurred.

Furthermore, Ito also shows inserting the ID into multiple groups. Ito shows imprinting the ID data into groups of 3x3 pixels (page 3 section 0050, imprinting the ID on groups of 3x3 pixels). Similar to the above, these groups of ID pixels are added to the "luminance data as a whole, so that the whole data...contain the ID." This establishes that the multiple IDs are spread out through the entire image data in groups of 3x3 pixels, and not that the entire frame contains a single copy of the ID. This, like above, is to ensure that if a particular section of pixels is not received, or cut-off, the ID may still be received as disclosed in paragraph 44.

Thus the Ito teaches each and every element of the claims.

Arguments with respect to claims 57-59.

Appellant argues that Ito discloses spreading ID information among pixels and does not teach, and in fact, teaches away from inserting more than one copy of the receiver data within a frame. Ito discloses dividing the frame into a plurality of groups and teaches inserting ID data into a group of pixels, but does not teach inserting a copy of the receiver identification data into each of the plurality of groups. (Page 13 paragraph 8-page 14 paragraph 1).

Regarding Appellant's argument, the Examiner reiterates Ito's teachings found in paragraph 44. As admitted by Appellant, Ito does teach dividing the frame into a plurality of groups and inserting data into a group of pixels. Further, as shown in paragraph 44, Ito discloses that the ID may be imprinted over the entire image or a portion of an image to prevent against partial cutoff. As discussed above, Ito shows imprinting the ID data into groups of 3x3 pixels (page 3 section 0050, imprinting the ID on groups of 3x3 pixels). Similar to the above, these groups of ID pixels are added to the "luminance data as a whole, so that the whole data...contain the ID." This establishes that the multiple IDs are spread out through the entire image data in groups of 3x3 pixels, and not that the entire frame contains a single copy of the ID. This, like above, is to ensure that if a particular section of pixels is not received, or cut-off, the ID may still be received as disclosed in paragraph 44.

Thus the combination teaches each and every element of the claims.

Arguments with respect to claims 1, 9 and 27.

Appellant argues that Ito's teachings in paragraph 47, teaches the opposite of Appellants invention as described in claim 1, and instead teaches splitting information for a single ID into several frames. (page 14, paragraph 3-page 16, paragraph 3).

Regarding Appellant's argument, the Examiner notes the presence of the word "may" on line 5, of paragraph 47. The word may, in this context means that Ito's system has the ability to perform this action, or in the alternative, performs the action. Ito's teaching clearly lacks an affirmative statement, that when motion images are displayed, ID information is to be divided into plural portions and different portions may be imprinted onto different image frames. Rather, Ito states, "For motion images, ID information may be divided into plural portions and different portions may be imprinted into different image frames." (Emphasis added by the Examiner) The above passage lacks any teaching that this approach occurs 100% of the time, nor even if it is the preferred method, rather it is a method which may be used, in the alternative.

Thus the combination teaches each and every element of the claims.

The above discussion applies equally to claims 9 and 27.

Arguments with respect to claims 17, 18, and 37.

Appellent argues that Ito fails to teach modifying a portion of the frame to include multiple copies of receiver data (page 16, paragraph 4-page 17, paragraph 3).

Regarding Appellent's argument, the Examiner directs Appellant's attention to the above discussion with regards to claim 19.

Arguments with respect to claims 45, 46, 48, 49, 51, 52, 54, 55, 57, 58, 60, and 61:

Appellent argues that Ito discloses spreading ID information among pixels and does not teach and in stead teaches away from, inserting more than one copy of receiver data within a frame. Ito teaches dividing the frame into a plurality of groups and teaches inserting ID data into a group of pixels, but does not teach inserting a copy of the receiver identification data into each of the plurality of groups (page 17, paragraph 3).

With regards to Appellent's argument, see the above discussion with regards to claims 57-59.

Arguments with respect to claims 47, 50, 53, 56, 59 and 62:

Appellent argues that Claim 47 recites that the plurality of lines recited in claim 46 each comprises a plurality of pixels, and also recites that means for repeatedly substituting a bit of the receiver identification data for a bit of a pixel in the line and skipping a plurality of pixels, for each of the lines in the group. The Office Action argues that the "skipping" feature is disclosed by Ito because it teaches "modulo 3 arithmetic" that can add 0 to the pixel value, which does not change the value and substantially

skips a pixel. Respectfully, adding a zero to a pixel is not analogous to skipping a pixel.

The same result may be achieved, but not in the same way (page 17, paragraph 4).

Regarding Appellent's argument, claim 47 requires means for repeatedly

substituting a bit of the receiver identification data for a bit of a pixel in the line and

skipping a plurality of pixels, for each of the lines in the group. First, as admitted by the

Appellant, Ito shows adding a "0" to a pixel value, which does not change the pixel value

(page 3 section 0050, offset of –1, 0, or 1 added to group of pixels). The reason for

skipping a pixel is to not change its value and move on to another pixel. This is clearly

accomplished by adding zero to a pixel and moving on to the next pixel, as disclosed by

Ito. Adding a zero to a pixel value results in no modification of the pixel's value.

Furthermore, as stated by the Applicant, the same result of "skipping" a pixel is

achieved and the limitation is met. Unless the Applicant discloses some other specified

method of skipping a pixel, the process shown by Ito clearly shows that a pixel is

skipped.

Thus the combination teaches each and every element of the claims.

Arguments with respect to claims 2, 10, 28, 29, 30 39 and 40.

Appellant argues that these claims incorporate the features of the claims they

depend upon and are patentable on the same basis (page 17, paragraph 5).

Regarding Appellant's argument, the Examiner directs appellant to the above discussions.

Arguments with respect to claims 3, 4, 11, 12, 21, 22, 31, 32, 41 and 42:

Appellant argues that Narayanaswami's teachings discloses imprinting the date that the image was created not the date that the receiver identification was inserted into the data representing the television content as recited in claim 3. The Final Office Action argues that it would have been obvious to modify Ito and Kimura to insert "date data so that one could identify when an image was displayed." Even if that were true and not the product of hindsight reconstruction, that is not was claim 3 recites. (Page 19, paragraph 1).

Regarding Appellant's argument, Narayanaswami clearly shows, imprinting the date into the data representing visual content (page 1 section 0004-0005, page 2 section 0013, automatically watermarking a plurality of parameters such s as time, date, and user identification). Furthermore, Narayanaswami states that "by invisibly watermarking parameters associated with a digital image within the image, the authenticity of the digital image may subsequently be verified..." (page 1 section 0005). The watermarking parameters of Narayanaswami are not meant to be exclusive and it is not possible to list every possible "date" that could be watermarked. Narayanaswami clearly shows the concept of watermarking a "date."

Further, the Microsoft Computer Dictionary defines capture as: In communications, to transfer received data into a file for archiving or later analysis.

As Ito in combination with Kimura discloses, receiving and modifying date with a watermark upon being captured (received data which is either archived or upon which analysis is preformed) and as Narayanaswami discloses an image capturing system which records and watermarks a number of parameters, including a date, which provides a means by which to check the authenticity of the image, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Ito and Kimura to include the date watermarking feature upon capture, as taught by Narayanaswami for the advantage of identify when an image was displayed.

Thus the combination teaches each and every element of the claims.

Arguments with respect to claims 21 and 22.

Appellant argues that claims 21 and 22 are allowable for the same reasons as described with respect to claims 3 and 4.

Regarding Appellents discussion, the Examiner directs Appellents attention to the above remarks with respect to claim 3.

Arguments with respect to claims 5, 13, 23 33 and 43:

Appellant argues that there is no teaching in the art to modify Ito, Kimura, and Narayanaswami to "use billing information on a card, so that the system would be able to embed a variety of receiver data into the water mark and determine appropriate billing for the functions." Via the Kaiser reference as proposed (page 19, paragraph 6, page 20, paragraph 1).

Regarding Appellants argument, claim 5 merely requires the use of a removable access card that stores the channel access data and billing data, and obtaining receiver id data from the card. Further the Examiner reminds appellant, that there must be motivation to combine either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Kimura teaches recording channel access data (col. 5 lines 25-67, col. 6 lines 1-44). Narayanaswami teaches the use of a magnetic card which is used to obtain the ID of the user for verifying the authenticity of the images. Further, Kaiser teaches the use of a STB which includes a card reader, which reads id or financial information, which is used in conjunction with selectable actions; this dated is then used for making a payment.   Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Ito, Kimura, and for the advantage of enabling the system to embed a variety of receiver data into the watermark and determine appropriate billing for the functions.

Thus the combination teaches each and every element of the claims.

Arguments with regards to claims 6, 14, 24 and 34:

Appellant argues that claim 6 recites that the receiver ID data is inserted into data representing the TV content by modifying the saturation data of the TV content. As disclosed by Appellant's specification at page 9, lines 1-3, luminance data is not saturation data. Once again Ito teaches away from Applicants specification. Further Applicant argues that there is no teaching to combine Ito and Hogan, as they are incompatible. Ito is directed to a system for invisibly watermarking content, while Hogan is directed to a system that uses changes in saturation data to deliberately distort images with watermarks (Page 20, paragraphs 2-6).

Regarding Appellents arguments, the Examiner disagrees. Ito discloses that imprinting ID information does have a small effect on the content quality (paragraph 52), and thus does not "invisibly" watermark the content as applicant claims. Further when content is illegally reproduced or modified, the offending user is punished by being identified (paragraph 58). In an analogous art, Hogan deals with a similar problem by manipulating the saturation data to include a digital watermark (col. 4 lines 25-60, col. 7 lines 8-15, changing the saturation value to imprint the video signal with a watermark). When a user performs an unauthorized reproduction, the user's signal is distorted significantly. Thus the systems are compatible as both systems disclose modifying the display content for the purpose of protecting the content provider.

Thus the combination teaches each and every element of the claims.

Arguments with regards to claims 8, 16, 26 and 36:

Appellant argues that any watermarking in Klosterman occurs in the head end, not at the receiver or similar structures. Klosterman teaches receiving EPG information that has been modified by the head end, not receiving information by the head end and modifying it (page 21, paragraphs 1-2).

Regarding Appellent's argument, Ito discloses in paragraph 39 that requested content is received and imprints the ID for the requested content prior to display. Thus Ito is relied upon to teach watermarking at the receiver. Ito however fails to disclose any watermarking of EPG data. Klosterman is relied upon to teach watermarking of EPG image information (paragraphs 70-71). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Ito and Kimura with the ability to show EPG data with an embedded watermark, as shown in Klosterman, so that the viewer could interactively view upcoming programs and shows while still providing the system with the capability of determining unauthorized viewing.

Thus the combination teaches each and every element of the claims.

(11) Related Proceeding(s) Appendix

The examiner is not aware of any related appeals, interferences, or judicial

proceedings, which will directly affect or be directly affected by or have a bearing on the

Board's decision in the pending appeal.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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